

TEN YEARS OF SCIENTIFIC AIRPLANE ASCENTS IN HOLLAND

By Dr. H. G. CANNEGIETER

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Ten years of upper-air observations by airplanes were completed at Soesterberg, Holland, in 1929, and eight years of similar observations at De Kooij, Holland. A

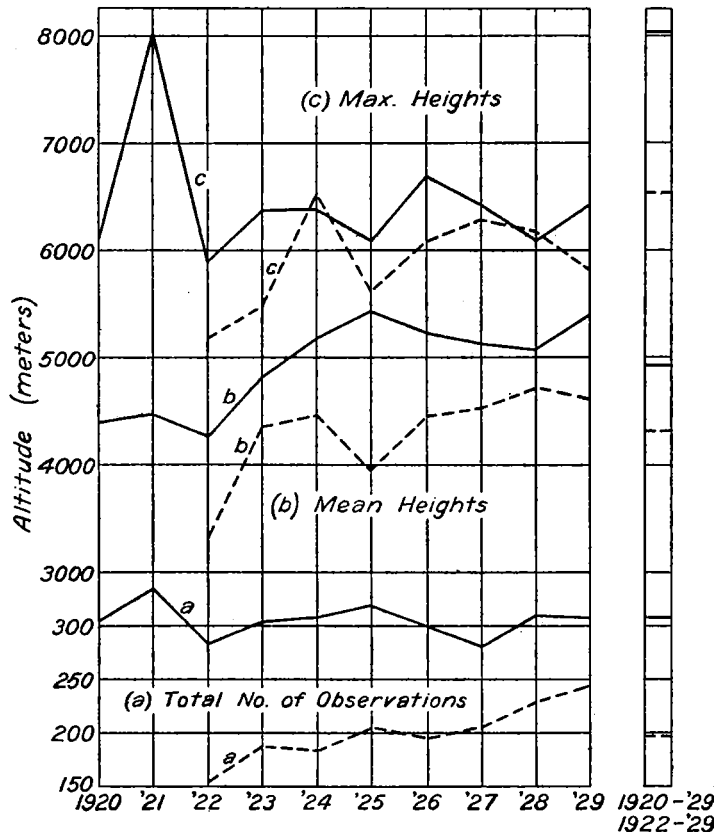


FIGURE 1.—Graph showing the total number of observations per year at Soesterberg, and the mean altitude attained

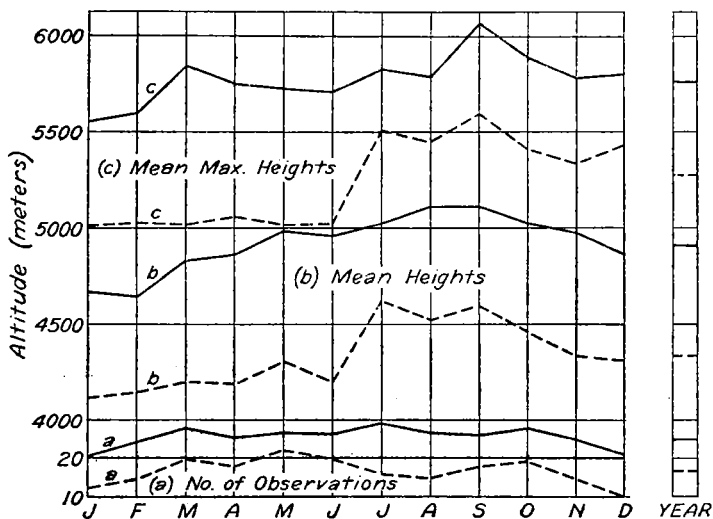


FIGURE 2.—Meteorological airplane observations in Holland: Solid line, Soesterberg, 1920-1929; dashed line, De Kooij, 1922-1929

good summary of the regularity of this service is shown by the accompanying charts.

It will be noted (fig. 1) that at Soesterberg the total number of observations per year averaged over 300 for the

10-year period and the mean altitude attained was nearly 5 km.

Figure 2 shows the monthly distribution. The least number of observations per month occurred in December and January, but at Soesterberg the average number of observations during these months did not fall below 20.

From 75 to 80 per cent of the observations were made before 10 a. m. and the remainder at later times during the day.

Note by abstractor.—It is interesting to compare these results with those obtained by kites and captive balloons in the United States. The average number of days per year (294) of kite and captive balloon observations at the five aerological stations of the Weather Bureau compares very favorably with these results. However, the mean altitude attained at these stations over the 9 year period 1922-1930, inclusive, is less than 2,700 meters above sea level.

S. HANZLIK ON ATMOSPHERIC PRESSURE EFFECT OF THE SUN-SPOT PERIOD

[Reprinted from Science Abstracts No. 754]

Part I. Yearly Means. S. Hanzlik. Gerlands Beitr. z. Geophys. 28. 1-3. pp. 114-125, 1930.—The difference of mean air pressure for the three years of sun-spot minimum and the succeeding three years of sun-spot maximum for stations over the whole globe is set out in a chart for each of the last five sun-spot periods, 1866-1919. Four different areas are indicated according to the sign of the effect. Areas of positive effect lie in the Indian monsoon region, pressure decreasing with increase of sun spots and vice versa. The fluctuations of this positive effect show a long period and a shorter one equal to two sun-spot periods (Hale's period). Over belts in middle latitudes and the Arctic regions Hale's period is shown but it is positive in middle latitudes when negative in the Arctic and vice versa. In South America there is a longer period but in a sense opposite to that in the Indian monsoon region. R. S. R.

SWEDISH-NORWEGIAN NORTHEASTLAND EXPEDITION

By LEONARD R. SCHNEIDER

During the summer of 1931, Hans W:son Ahlmann, professor of geography at the University of Stockholm, will lead a party of scientists to the little known region on and about Northeastland. Professor Ahlmann's party will board the *Quest* on or about June 15 at Narvik, Norway, and after a call at Spitzbergen to take on board supplies and a dog team, a stop will be made in Hinlopen Strait where, on Northeastland, supplies will be unloaded and a base camp constructed. Immediately upon the establishment of the base camp the members of the expedition will begin a summer of intensive study.

Two groups, one to study on the land, and one to carry on investigations in the nearby seas will conduct the major activities. Briefly, the land party will have as its work the following: (1) Meteorologists at the base camp will report their observations by radio to the *Quest* and to Sweden and Norway, (2) Professor Ahlmann and two assistants will go onto the inland ice for a month's study, and (3) geologists under O. Kulling and L. Rosenbaum, a topographer, will concentrate their efforts along Hinlopen Strait.

The investigations on board the *Quest* will be limited to the waters in the vicinity of Spitzbergen. The work of gathering sea-water temperatures, sea-water samples and of measuring depths, will be directed by H. Mosby of the Geofysikal Institut, Bergen.

In concluding this summary of the projected work of the expedition it may be of interest to point out that the winter 1930-31 on Spitzbergen was unusually mild. In fact, at the end of March there was no ice in the expansive Icefjord and none on the sea in the immediate coastal region.

UPWELLING COLD WATER ON THE COAST OF NEW JERSEY

By CHARLES F. BROOKS

[Clark University, Worcester, Mass.]

On Sunday, July 7, 1929, while people were sweltering in New York City, others who had sought the Jersey coast were actually wearing coats. Mr. Henry B. Newhall reports that a friend of his, who has a summer home at Manasquan, was fishing in a lined fishing or hunting coat and was glad to have it on, but, he said that only a few thousand feet away from the shore it was pretty hot. They had had a strong S. to SE. wind for two or three days. The water, as somebody told him, as reported by the coast guards, was at unbelievably low temperatures—in the 40s.

In response to a request for the official temperatures, Assistant Commandant B. S. Chiswell, supplied the sea temperature readings for the first 15 days in July at Manasquan, N. J. They run as follows, beginning with the 1st; 47, 48, 52, 50, 48, 47, 46 (on the 7th), 50, 55, 60, 64, 68, 68, 70, 70 degrees. The sea temperature at Atlantic City from July 1 to 11, inclusive, as reported by Walcott L. Day, meteorologist, United States Weather Bureau, ranged from 62° to 67° and was 64° F. on the 7th. Atlantic City air temperatures that day ranged from 67° to 76° and on the preceding day 68° to 76° F. Winds on the 7th were S. to SW., 17 to 29 miles an hour. The wind on the 6th was of the same direction but averaged 16.4. Rather strong southerly winds prevailed also on the 4th and 5th, with average velocities of 18 and 20 miles an hour and maxima of 29 and 30, and an extreme 5-minute velocity of 32 miles.

On this occasion the S. to SW. winds which were on-shore for Atlantic City were off-shore for the coast of New Jersey farther north. The tendency of wind to blow water in the direction 45 degrees to the right of its own direction in the northern hemisphere would favor a rapid removal of surface waters eastward and the consequent upwelling along the coast.

In the MONTHLY WEATHER REVIEW for June, July, and August, 1920 (48: 352-353, 424, 477-478), there are notes on a similar occurrence, attending a usual frequency of off-shore winds that summer.

G. T. WALKER ON SEASONAL FORESHADOWING

[Reprinted from Science Abstracts No. 757]

Roy. Meteorolog. Soc., J. 56, pp. 359-362; Disc., 362-364, October, 1930.—The paper contains results obtained by the author and E. W. Bliss in applying various relationships in different parts of the world to predict abnormal seasons. The application has been made for: (1) Summer monsoon rainfall in Australia which gave 24 successes of excess or deficit in 28 years, 2 failures and 2 years normal; (2) South African rainfall; (3) winter temperature in southwest Canada, and (4) winter temperature in northwest Canada. It is considered unwise at present to issue a prediction except in years when the indications of excess or defect are so strongly marked as to give a chance of success of 4:1 or 5:1 and this occurs in only about half the years.

R. S. R.

ICE IN THE ARCTIC SEA, 1930¹

[Report of the Danish Meteorological Institute]

The Danish Meteorological Institute has issued its report on the State of the Ice in the Arctic Seas, 1930. In European Arctic waters there was extraordinarily little ice. In the Barents Sea and around Spitsbergen open water was more extensive than in any other year during this century. So early as February, the ice edge in the Barents Sea was in the normal position of May and June, and by August it was lying north of the western islands of Franz Josef Land instead of some three degrees to the south. Bear Island was free from ice by April, and remained free throughout the summer. From the autumn of 1929 until April, 1930, the whole west coast of Spitsbergen was clear of ice. After a little ice in May and June, the coast was again completely clear, and in July and August, the ice edge lay in lat. 81° N. During August the entire archipelago was free from ice, and there was practically no ice between Spitsbergen and Franz Josef Land. The Kara Sea was clear enough to be navigable in August and September. On the east coast of Greenland the ice was fairly abundant until the autumn, when parts of the coast were easily accessible. Iceland was almost ice free throughout the year. In Davis Strait the amount of ice was below the normal. Hudson Strait and Bay were clear of ice in July and August. In contrast with these comparatively ice-free coasts, Alaska and eastern Siberia had the pack ice up to their coasts for most of July and August. In fact, the polar ice would appear to have been driven against these coasts rather than out into the Barents and Greenland Seas.

¹ Reprinted from Nature, London, May 30, 1931, p. 834.

BIBLIOGRAPHY

C. FITZHUGH TALMAN, in charge of Library

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

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Characteristic weather phenomena of California. A regional analysis based on aeronautical weather observations. With a chapter on winter fogs, by Wilbur M. Lockhart. Cambridge. 1931. 54 p. figs. plates. 28 cm. (Mass. inst. tech. Met'l papers, v. 1, no. 2.)

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